

**An environmental aerial tour of the Navajo Reservation
For Environmental Foundations
November 1995
Flight donated by Lighthawk of Santa Fe, NM**

NAVAJO RESERVATION. On June 1, 1868, a treaty was signed with the U.S. Government. The treaty established the initial boundaries of the Navajo Reservation. Today our land covers 16 million acres, located in the states of Arizona, New Mexico and Utah in 11 counties. Navajo population is over 200,000. Navajo Nation is closest in size to West Virginia, and is bigger by 1,120 acres, but it has about 20% of that state's total distance in paved roads. Approximately 80 % of our households are without telephone connectivity or electricity.

WINDOW ROCK, ARIZONA. Capital of the Navajo tribal government. The Navajo Tribe operates under Tribal resolutions which are approved by the Secretary of Interior. All Tribal Council resolutions are contained in the Navajo Tribal Code. The Navajo Tribal Council was first established by the Secretary of Interior in 1923 in order to obtain Tribal approval for oil and gas leases.

Educational Attainment (1990) for the Navajo person over 25 and older with

Less than 9th grade	36.4%
9th grade to 12th grade, no diploma	22.4%
High-school Graduate	24.2%
Some College, no degree	10.4%
Associate degree	3.7%
Bachelor's Degree	1.9%
Graduate/Professional degree	1.0%

Income and Poverty Status 1990:

Per Capita Income	\$ 4,106
Median Family Income	\$11,885
Percent of Persons below the poverty level	56.1%
Percent of Families below the poverty level	57.4%

While the Navajo Nation ranks first among the Nation's Indian Reservations for total geographical area, second in population, and was one of the richest in natural resources, it ranks--in terms of median family or individual income levels as the poorest of the ten largest tribes in the United States.

Tribal resources:



Oil & gas Approximately 455,022.66 acres of the Navajo reservation is affected by exploration, development and production of oil, gas helium, and other hydrocarbon resources.

Uranium In 1958, the Bureau of Indian Affairs (B.I.A.) leased over 90,000 acres of tribal lands for uranium exploration and development. Today, there are over 1,000 abandoned and unreclaimed open-pit and underground uranium mines.

Coal Approximately 1 billion ton of coal reserve are within the tribal lands. Two coal fired power plants (Four Corners & Page) and three mines (Peabody, BHP, and PNM). Total permitted for mining is 95,724 acres and total disturbed is 16,767 acres. Eighty percent of the tribal revenues comes from coal royalties & tax.

Forest 690,498 acres forest on the Navajo lands within the Colorado Plateau. 152,945 acres are non-commercial (piñon, juniper, oak, rock). 498,897 acres are commercial timberlands. *Forest species:* 95% volume is ponderosa pine, 4% is Douglas fir, and .4% is aspen. *Wildlife species:* bear, beaver, chipmunk, bobcat, mountain lion, fox squirrel, porcupine, mule deer, wild turkey, hawks, ducks, geese, falcons, eagles, roaming elks, coyote, rabbit and owl.

CANYONCITO

Thirty miles west of Albuquerque is the uranium-rich Canyoncito Navajo Reservation. This is the traditional homeland of the Canoncito Band of Navajos. In the late 1970's, Exxon corporation proposed to lease the entire reservation for uranium exploration and development. Yet fortunately, the uranium market slumped

GRANT'S MINERAL BELT: JACKPILE MINE

From Canyoncito before Exxon could get a foothold on the band territory. to the Navajo community of Church Rock is a 120-mile long (and 20-mile wide) strip of land called the Grant's Mineral Belt. The Grants Mineral Belt contains the nation's largest unmined (and unmilled) reserve of uranium. It also contains a large supply of coal which is now being mined.

The Grants Mineral Belt also underlies the lands of the Laguna and Acoma Pueblos as well as many off-reservation Navajo communities.

1951- Jackpile deposit on Laguna Pueblo, near the village of Pagate was discovered from a radioactive anomaly picked up by an Anaconda Minerals Company plane. This was confirmed with a ground check later the same day (Nov. 8, 1951) The following day the crew returned with J.D. Jack Knaebel, manager of Anaconda's New Mexico operations.

1952- On May 7, 1952 a lease was signed between Laguna Pueblo and Anaconda Copper Company to mine uranium at Jackpile. The size of the first lease was 4,988 acres.

- 1953-1960-** Mining operations begin at Jackpile Mine. Anaconda employed 125 workers.
- 1961-68-** Employment jumped to 350-450 employees, majority Lagunas.
- 1963-** Electronics industrial plant Burnell builds industrial building at Mesita, trains and employs 200 Lagunas, closes in 1970. Later on Raytheon takes over and initiates current Laguna Industries producing communication shelters for the military.
- 1950-1970-** Farming decreased from almost 40% of total employment in 1950 to almost 0 in 1970.
- 1968-** National Environmental Protection Act passed by Congress which includes regulating mining industry with the exception of hard minerals including uranium.
- 1982-** Jackpile Mine closes due to depressed uranium market conditions.
- 1990-** Laguna Construction Company starts reclamation of Jackpile Mine. Currently, the reclamation is near completion.

The mine is in its 30 year lifetime grew to be the largest open pit uranium mine in the world. Over the thirty year period (1953-1982) out of a total of 7,868 leased acres 2,656 were disturbed by mining. The disturbance included 3 open pits, 32 waste dumps, 23 protore (sub-grade ore) stockpiles, four topsoil stockpiles and 66 acres of buildings and roads.

During the 29 years of mining approximately 400 million tons of earth were moved and about 25 million tons of ore were transported from the site via the Santa Fe Railroad to the Bluewater Mill, 40 miles west of the mine.

According to tribal records at Laguna, the tribe earned over \$85 million in wages, and the Laguna tribe earned \$71 million in royalties, \$200,000 in lease payments and \$2.4 million in contributions for maintenance and repair.

The following 2 pages are maps indicating the Aerial Gamma Survey of the Minesite and surrounding area.

From 1953 to 1982, the world's largest uranium strip-mine operated on the Laguna Pueblo reservation. It was called the Jackpile Mine. Radiation from this open-pit mine continues to present a clear and present danger to all living things in the area.

The Grants Mineral Belt also underlies Mount Taylor which is one of the four sacred mountains of the Navajos. It is also sacred to the Laguna, Acoma, and Zuni Pueblos. (information on Jack Pile Mine provided by Al Waconda of Laguna, NM)

MT. TAYLOR: LEE RANCH COAL MINE

From 1979 to 1990, Mount Taylor was the site of the largest underground uranium mining operation in the country. Like the Jackpile Mine, the Mt. Taylor Mine is like a cancer on earth. Mount Taylor is also the site of a large coal mining operation. Coal mined at the Lee Ranch Mine is hauled by a rail spur to the Plains Escalante Power Plant near the Navajo community of Prewitt.

PREWITT

West of Prewitt is the predominately Navajo community of Thoreau. Thoreau is the proposed site of a regional hazardous waste dump.

THOREAU, IYANBITO & FORT WINGATE ARMY DEPOT

West of Thoreau is the Navajo community of Iyanbito which is negatively impacted by the Cinza Gas Refinery (a Superfund site) and the Fort Wingate Army Depot (which stored ammunition, TNT, and mustard gas during World Wars I and II). Despite opposition from the Iyanbito Chapter and the Navajo Tribe, the U.S. Department of Defense proposes to use the Fort Wingate facility to test and launch missiles.

CHURCH ROCK

West of Iyanbito is the Navajo community of Church Rock which was the scene of the nation's largest radioactive waste spill. In 1979, a uranium mill tailings dam near church Rock broke and released deadly radioactive wastes into the Puerco River which flows through Church Rock and a dozen other Navajo communities downstream. The church Rock mill is now a Superfund site. Church Rock is also the *proposed* site of a large uranium mining and milling operation.

COAL MINES

In 1979, 38 uranium mines and five uranium mills operated in the Grants Mineral Belt. Although now inactive, these unreclaimed and unremediated death factories remain highly radioactive.

Southeast of Gallup is the unreclaimed Amcoal (Coal) Mine. The Amcoal Mine is located west of Navajo land.

Northwest of Gallup is the unreclaimed Mentmore (Coal) Mine. The Mentmore Mine is located near the Navajo community of Mentmore. Northwest of Mentmore is the large McKinley (Coal) Mine and Railroad. Part of the McKinley mine and railroad complex is located on the Navajo reservation. The rest of the mine and railroad is located in the Navajo Checkerboard Area between Window Rock and Ya Ta Hey.

ANETH OIL FIELD

The Aneth Oil Field in the Utah portion of the Navajo reservation is one of the nation's largest oil and gas fields. It has caused numerous oil spills and hydrogen sulfide gas leaks, too numerous to mention. For the past forty years, unregulated oil-field wastes from the Aneth Oil Field have a deterrious effect on the environment and culture of the Utah Navajos. Spill events occur as a result of breaks in pipelines or equipment failure, spills from surface pit impoundments, overflow of storage tank facilities and spills from tanker trucks hauling oil from a tank battery or lease. Damage to soils, vegetation, water, livestock and wildlife resources has

occurred. The future looks bleak as there are now government-corporate plans for the "secondary recovery" of Aneth Oil Field reserves.

The Utah Navajo Reservation is also the site of past uranium milling activity. Widespread groundwater contamination from the former mill sites continue to plague the local tribal residents. There are also plans to reopen a large uranium mill just north of the Utah Navajo and White Mesa Ute reservations.

TEEC NOS POS, AZ

Near the Four Corners National Monument is the Navajo community of Teec Nos Pos. Teec Nos Pos was the site of a dangerous hydrogen sulfide gas blowout in 1989.

Southeast of Teec Nos Pos is the reservation community of Beclabito. Beclabito is located within a former uranium exploration, mining, and milling lease. The 400,000-acre lease extended south to the tribal community of Toadlena in the Chuska Mountains.

SHIPROCK, NM

Southeast of Beclabito is the Navajo community of Shiprock. Shiprock is the site of past uranium milling activity. Widespread groundwater (and possible surface water) contamination from the former mill site continue to plague the reservation community. Shiprock is also the site of past helium gas processing.

South and east of Shiprock are the Hogback Oil Field, Burnham (Coal) Mine, Four Corners Power Plant, Navajo (Coal) Mine and Railroad, Lake Morgan, Navajo Indian Irrigation Project, Bisti-Star Lake Coal Field, Gateway (Coal) Mine, De Na Zin (Coal) Mine, Proposed Navajo South (power plant & coal mine) Project, proposed Navajo Railroad Project, proposed Crownpoint Uranium Mining and Milling Project, Hospah Oil Field, and the Ambrosia Lake (Uranium) Mine.

NAVAJO, AZ.

North of Window Rock is the town of Navajo, home of the Navajo Forest Products Industry and its abandoned sawmill.

CHUSKA MOUNTAINS (DEFIANCE PLATEAU).

Dine • CARE Chuskas Forest Project represents a long term campaign by the group to restore and protect the Chuska mountains. The campaign began in 1991, with efforts to ensure accountability by the Navajo Nation and the BIA to the Navajo people regarding the cutting of timber on the Chuska mountains. When those efforts were actively resisted by the Navajo Nation government and the BIA, the group initiated appeals and lawsuits over proposed timber sales. These legal efforts tried to get the BIA and the Navajo Nation to comply with environmental laws, since there

was no sign that the Navajo Nation government was upholding its responsibility to the people to the people to protect the Chuska mountains.

At the same time, the group has pressured Navajo Tribal Council to require that the Navajo Forest Products Industries mill, which has accumulated nearly \$20 million of debt, to account for all the money that has been lost. The Council shut down the mill to avoid continuing financial losses and Dine CARE has urged that the mill not be reopened until these financial issues are resolved.

The group now is participating in a lawsuit, where a federal judge has required the BIA, under the Endangered Species Act, to consult with USFWS on the cumulative effects of the timber sales in the Chuskas and on the Defiance Plateau on the Mexican Spotted Owl. As a consequence of that lawsuit, no further timber sales will take place in the Navajo Nation forests until the BIA complies with the Endangered Species Act.

In looking to the future, the group is monitoring the development by the Navajo Nation and BIA of a new Forest Management Plan and an accompanying Environmental Impact Statement to ensure that the traditional values of the people who live on the mountain are protected. Finally, we are developing a forest management map of the Chuskas that reflects the traditional cultural, environmental and economic values of the people who live on the mountain.

Lukachukai Mountains.

The Lukachukai Mountains connect with the north end of the Chuska Mountains. The Lukachukai Mountains are the site of the Dine Bi Keyah Oil Field. The Dine Bi Keyah Oil Field is the largest producing oil field in the state of Arizona. The Northern Lukachukai Mountains are also the site of past uranium mining activity.